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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,105	08/09/2006	Norbert Schneider	PAT-00385	2614

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WYANDOTTE, MI 48192

EXAMINER
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ABU ALI, SHUANGYI

ART UNIT	PAPER NUMBER
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1793

NOTIFICATION DATE	DELIVERY MODE
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07/23/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/595,105	<b>Applicant(s)</b> SCHNEIDER ET AL.	
	<b>Examiner</b> SHUANGYI ABU ALI	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 16-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/14/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group 1, claims 1-15 in the reply filed on 05/01/2009 is acknowledged. The traversal is on the ground(s) that the reference fails to disclose that the aluminum oxide is complete or near –complete parallel orientation and titanium oxide is not transparent. The Examiner respectfully submits that the flake aluminum pigment usually has an aspect ratio of 50-500, therefore the pigment is near parallel orientated. As for the argument that the titanium oxide is general used as opaque pigment, the Examiner respectfully submits that titanium oxide can be transparent. The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the term "near-complete" in claim 1 is a relative term which renders the claim indefinite. The term "near-complete" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

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Regarding to claim 4 it is not clear the thickness of the particles (A). The particle thickness is 50 micron or in a range including 50 micron? The Examiner treats the thickness as less than 50 micron.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP2004-175813 to Takano (The English language equivalent, U.S. Patent No. 7,485,674, will be used for the citation of column and line.)

Regarding claims 1 and 5, Takano disclose a composition comprises aluminum flake pigment with a diameter of 1-100 micron and a thickness of 0.01-5 micron and a resin powder. (Abstract and col. 5, lines 9-17) The resin can be elected from acrylic

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acid, methacrylic ester, and acrylic ester, because a coat attaining transparency, adhesiveness, weather resistance, and chemical resistance is formed. (col. 7, lines 7-10).

The reference differs from Applicant's recitations of claims by not disclosing identical ranges (the ratio of the diameter to thickness is in the range of 100-10). However, the reference discloses "overlapping" ranges (0.02-10000), and overlapping ranges have been held to establish prima facie obviousness (MPEP 2144.05).

Regarding claim 2, the amount of the aluminum pigment to the resin is smaller than 50:1, and this overlaps the range of 1:1 to 1:10.(col.7, lines 15-26)

Regarding claim 3, the aluminum pigment is in the range of 1-100 micron, which overlaps the range of 50-300 micron. (Abstract and col. 5, lines 9-17)

Regarding claim 6, Takano disclose that an oligomer binder, which bonds the flake pigment and resin, is used in the composition. (abstract)

Regarding claim 7, Takano disclose that terpene/phenol-type resin et al. is being used as a binder. (col.8, lines 5-21)

Regarding claim 8, Takano disclose that an additive can be contained on the surface of the flake pigment. (col. 5, lines34-35)

Claims 1, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 10027293.

Regarding claims 1, and 13, DE'293 discloses a pigment composition containing a platelet aluminum effect pigment coated with polymer and a transparent powdery coating. The aluminum pigment's property has a ratio of thickness to diameter in a

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range off 0.02-0.002(evidence by the search report). The polymer coating is a leaflet-shape particle. The aluminum platelet effect pigment is coated on the polymer-the leaflet-shape particle. The effect pigment has an aspect ratio of  $1/0.02=50$  to  $1/0.002=500$  (i.e. this reads on leaflet-shaped). The transparent particles can be resin or titanium oxide. (Page 3 paragraph 5, page 4 paragraph 10) The reference differs from Applicant's recitations of claims by not disclosing identical ranges (the ratio of the diameter to thickness of 100-10). However, the reference discloses "overlapping" ranges (50-500), and overlapping ranges have been held to establish prima facie obviousness (MPEP 2144.05).

Regarding to claim 14, it is noted that claim 14 is a product-by-process claim. Eventhough product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 77F.2d 695, 698,227 USPQ 964,966 (Fed. Cir. 1985) (citations omitted).

Claims 1-8 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2004/0191198 A1 to Hochstein et al., in view of WO 02/090448. (The English language equivalent, U. S. Patent No. 7, 226, 503, will be used for the citation of column and line.)

Regarding claims 1, 3-5, and 12-13, disclose a pigment mixture comprising component A and component B. The component A comprises of an effect pigment. The effect pigment comprises glass flake. The glass flake is coated with one or multiple layers, such as titanium oxide coating. The glass flake has a thickness of less than 1 micron and a size of 10-80 micron. The component B comprises of spherical colorant or filler. The component B can be a transparent substrate. But they are silent about the effect pigment aspect ratio as applicant set forth in claim 1.

However, Anselmann et al, also dawn to glass effect pigment, disclose that the glass flake pigment in general has a one or two layer coating with a layer thickness of up to 1 micron. The glass flake has a thickness of less than 1 micron and a diameter size of 5-150.

Therefore, it would have been obvious one of ordinary skill in the art at the time of invention by applicant to use the aspect ratio of Anselmann et al. in the teaching of Hochstein et al., motivated by the fact that Anselmann et al., also dawn to glass flake effect pigment, disclose that such pigment has advantageous application properties (col. 2, lines 27-30).

Regarding claim 2, Hochstein et al. disclose that the ratio of glass flake (A) to the component B is from 1:10 to 10:1. ([0031])

Regarding claims 6-8, Hochstein et al. disclose that the effect pigment has a protective coating (binder) such as polyethylene and silicones. ([0018])

Regarding claim 14, it is noted that claim 14 is a product-by-process claim. Eventhough product-by-process claims are limited by and defined by the process,

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determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 77F.2d 695, 698,227 USPQ 964,966 (Fed. Cir. 1985) (citations omitted).

Regarding claim 15, Hochstein et al. disclose that all the spherical particles can be used as component B. ([0019]).

Claims 9 -11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2004/0191198 A1 to Hochstein et al., in view of WO 02/090448., further in view of U. S. Patent No. 5,565,025 to Schraml-Marth.

Regarding claims 9 -11, combined teaching of Hochstein et al. and WO'448 discloses a composition as applicant sets forth in claim 1. It is noted that claims 9 and 11 are a product-by-process claims. Eventhough product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 77F.2d 695, 698,227 USPQ 964,966 (Fed. Cir. 1985) (citations omitted).Anselmann et al. disclose that the coating layer thickness on the glass flake is up to 1 micron. But they are silent that the glass flake comprises a transparent layer as applicant set forth in claims 9-11



However, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to use transparent titanium oxide in the composition, motivated by the fact that Schraml-Marth, also drawn to pigment, discloses that transparent titanium oxide has good UV absorbing property (col.2, lines 12-17).

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0008963 to Hashizume in view of U. S. Patent No. 6,017,989 to Malm et al.

Regarding claims 1, 5 and 12-13, Hashizume disclose that a composition comprises aluminum flake pigment (effect pigment) and rounded resin particles can be used in auto industry (abstract, [0001]). Example of the powder resin includes polyester or acrylic resin resins ([0008]). The effect pigment has an aspect ratio of 5-100 [0013]). But they are silent about the resin is transparent.

However, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to use transparent resin in the composition of Hashizume, motivated by the fact that Malm et al, also drawn to effect pigment and resin composition, disclose that resin, when it is transparent, can be used in the automotive market and be colored to match the appearance of the painted exterior of the vehicle, while maintaining physical properties suited to the particular application. (col. 1, lines 30-40).

Regarding claim 2, Hashizume disclose that the aluminum flake effect pigment amount is about 0.1-30 part per 100 part resin. ([0015])

Regarding claim 3, Hashizume disclose that the aluminum pigment has a size of 5-50 micron. ([0013])

Regarding claim 4, Hashizume disclose that the aluminum pigment has a thickness of 0.1 to 5 micron. ([0013])

Regarding claims 6-7, Hashizume disclose that the effect pigment can be coated a coating of polymer such as acrylic polymer, which is transparent. ([0010])

Regarding claims 8- 9, Hashizume disclose that the effect pigment can be coated with a layer of color pigment layer (additive) and a coating of polymer such as acrylic polymer ([0010]), which is transparent. Malm et al, disclose the colorant used in the resin –effect pigment composition should be transparent (col.6, lines 45-53). “Product by Process claims do not patentably distinguish the product of reference even though made by a different process.” In re Thorpe , 227 USPQ 964.

Regarding claim 10, since the total pigment thickness is in the range of 0.1-5 micron, it is reasonable to expect that each layer of the effect pigment is less than 5 micron.

Regarding claim 11, Hashizume disclose that the effect pigment can be coated with a coating of polymer such as acrylic polymer (binder) ([0010]). “Product by Process claims do not patentably distinguish the product of reference even though made by a different process.” In re Thorpe , 227 USPQ 964.

Regarding claim 14, it is noted that claim 14 is product-by-process claims. Eventhough product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a

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product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 77F.2d 695, 698,227 USPQ 964,966 (Fed. Cir. 1985) (citations omitted).

Regarding claim 15, Hashizume disclose that the resin powder has a size of 10-100 micron. ([0008])

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHUANGYI ABU ALI whose telephone number is (571)272-6453. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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